

## CLAIMS

1. A plasma display device provided with a plasma display panel comprising a plurality of columns of discharge cells having one of a single color  
 5 and multiple colors, and a phosphor layer disposed in each of the discharge cells, the phosphor layer having a color corresponding to the each discharge cell for emitting light when excited by ultraviolet rays, wherein

the phosphor layer includes a green color phosphor comprising a phosphor material defined by a general formula of  $M_{1-x} Al_{12} O_{19} Mn_x$  (where "M" denotes  
 10 one of Ca, Sr, Eu and Zn).

2. A plasma display device provided with a plasma display panel comprising a plurality of columns of discharge cells having one of a single color  
 and multiple colors, and a phosphor layer disposed in each of the discharge cells,  
 15 the phosphor layer having a color corresponding to the each discharge cell for emitting light when excited by ultraviolet rays, wherein

the phosphor layer includes a green color phosphor comprising a mixture of a phosphor material defined by a general formula of  $M_{1-x} Al_{12} O_{19} Mn_x$  (where "M" denotes one of Ca, Sr, Eu and Zn) and one of phosphor materials defined by  
 20 general formulae of  $(Y_{1-a-y} Gd_a) (Ga_{1-x} Al_x)_3 (BO_3)_4 Tb_y$ , and  $(Y_{1-a-y} Gd_a) (Ga_{1-x} Al_x)_3 (BO_3)_4 Ce_y Tb_y$ .

3. A plasma display device provided with a plasma display panel comprising a plurality of columns of discharge cells having one of a single color  
 25 and multiple colors, and a phosphor layer disposed in each of the discharge cells, the phosphor layer having a color corresponding to the each discharge cell for emitting light when excited by ultraviolet rays, wherein

P 35324

the phosphor layer includes a green color phosphor comprising a mixture of a phosphor material defined by a general formula of  $M_{1-x} Al_{12} O_{19} : Mn_x$  (where "M" denotes one of Ca, Sr, Eu and Zn) and another phosphor material defined by a general formula of  $(Y_{1-a-y} Gd_a) BO_3 : Tb_y$ .

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4. A plasma display device provided with a plasma display panel comprising a plurality of columns of discharge cells having one of a single color and multiple colors, and a phosphor layer disposed in each of the discharge cells, the phosphor layer having a color corresponding to the each discharge cell for emitting light when excited by ultraviolet rays, wherein

10

the phosphor layer includes a green color phosphor comprising a mixture of a phosphor material defined by a general formula of  $M_{1-x} Al_{12} O_{19} : Mn_x$  (where "M" denotes one of Ca, Sr, Eu and Zn) and another phosphor material defined by a general formula of  $(Y_{1-a-y} Gd_a) (Ga_{1-x} Al_x)_5 O_{12} : Tb_y$ .

15

5. The plasma display device according to one of claim 1 to claim 4, wherein a value "x" in the general formula of  $M_{1-x} Al_{12} O_{19} : Mn_x$  (where "M" denotes one of Ca, Sr, Eu and Zn) is within a range of  $0.01 \leq x \leq 0.06$ .